

## Amendments to the Claims

### I. Amendments

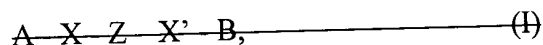
Please cancel claims 1-2, and 4-46, without prejudice or disclaimer thereto.

Please amend claim 3 as indicated below, and add new claims 47-65.

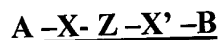
### II. The Claims of the Application

Claims 1.-2. (Cancelled)

Claim 3. (Currently Amended) A method of producing a composition containing The modified protein or polypeptide molecules, or salts thereof, wherein said modified protein or polypeptide molecules of said composition consist essentially of a compound selected from of claim 1 having the formula



in which



wherein

A is a residue of a protein or polypeptide having a carboxy and amino terminus and is connected to X-Z-X'-B exclusively at said carboxy or amino terminus;

B is a polymeric compound ~~residue of a protein or polypeptide, a reporter group or a cytotoxic agent;~~

X and X' independently from each other are bivalent organic radicals or independently from each other are present or ~~may be absent;~~

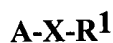
Z is a bivalent radical selected from the group consisting of:  
-C(R)=N-, -N=C(R)-, -CH(R)-NH-, -NH-CH(R)-,  
-C(R)=N-Y-N=C(R)-, -N=C(R)-Y-C(R)=N-,  
-CH(R)-NH-Y-NH-CH(R)- and -NH-CH(R)-Y-CH(R)-NH-,  
-C(R)=N-O-, -O-N=C(R)-, -CH(R)-NH-O-, -O-NH-CH(R)-,  
-C(R)=N-O-Y-O-N=C(R)-, -O-N=C(R)-Y-C(R)=N-O-,  
-CH(R)-NH-O-Y-O-NH-CH(R)- and -O-NH-CH(R)-Y-CH(R)-  
NH-O-;

where

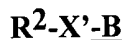
R is hydrogen or an aliphatic, cycloaliphatic, aromatic or  
araliphatic hydrocarbon group, ~~which group may be substituted~~  
~~with the same or a different protein or polypeptide, a reporter~~  
~~group or a cytotoxic agent, with at least one aromatic radical or~~  
~~oxygen adjacent to nitrogen;~~ and

Y is a bivalent organic group,

wherein said method comprises condensing a compound of the  
formula:



wherein R<sup>1</sup> is a -CO-R group, an acetalized formyl group, or an  
amino or protected amino group, and A, R, and X are as defined  
above, with a compound of formula:



or a compound of formula:



where R<sup>2</sup> is amino when R<sup>1</sup> is -CO-R or acetalized formyl and R<sup>2</sup> is -  
CO-R or acetalized formyl when R<sup>1</sup> is amino, and X', Y, R and B are  
as defined above, to form a Schiff base, hydrazone, oxime or  
azomethine compound, and optionally,

**reducing the  $-C(R)=N-$  or  $-N=C(R)$  formed by the condensation to  $CH(R)-NH-$  or  $-NH-CH(R)-$ , respectively, and optionally forming a salt.**

Claims 4-46 (Cancelled)

- Claim 47. (New) The method of producing a composition of claim 3, wherein said residue A is a carboxy terminal residue.
- Claim 48. (New) The method of producing a composition of claim 3, wherein said residue A is an amino terminal residue.
- Claim 49. (New) The method of producing a composition of claim 3, wherein said polymeric compound B is a protein or polypeptide that is the same or different from said protein or polypeptide A, or is a reporter group or cytotoxic agent.
- Claim 50. (New) The method of producing a composition of claim 49, wherein said polymeric compound B is a protein or polypeptide that is the same as said protein or polypeptide A.
- Claim 51. (New) The method of producing a composition of claim 49, wherein said polymeric compound B is a protein or polypeptide that is different from said protein or polypeptide A.
- Claim 52. (New) The method of producing a composition of claim 49, wherein said polymeric compound B is a reporter group.
- Claim 53. (New) The method of producing a composition of claim 49, wherein said polymeric compound B is a cytotoxic agent.

- Claim 54.     **(New)** The method of producing a composition of claim 52, wherein said polymeric compound B is a reporter group comprising a metal chelating organic compound.
- Claim 55.     **(New)** The method of producing a composition of claim 3, wherein R is hydrogen.
- Claim 56.     **(New)** The method of producing a composition of claim 3, wherein said polymeric compound B comprises a compound selected from the group consisting of:
- (i)     desferioxamine B, or a metal derivative thereof;
  - (ii)    diethylenetriaminepentaacetic acid, or a metal derivative thereof;
  - (iii)   [Nε-(diethylenetriaminepentaacetic acid -alanyl)-Lys]<sub>5</sub>, or a metal derivative thereof; and
  - (iv)    a polyglutamic acid having at least two ferioxamine B residues coupled thereto.
- Claim 57.     **(New)** The method of producing a composition of claim 3, wherein Z is -CH<sub>2</sub>-NH- , or -NH-CH<sub>2</sub>- .
- Claim 58.     **(New)** The method of producing a composition of claim 3, wherein Z is -C(R)=N- , or -N=C(R)- .
- Claim 59.     **(New)** The method of producing a composition of claim 3, wherein Z is -CH(R)-NH-, or -NH-CH(R)-.
- Claim 60.     **(New)** The method of producing a composition of claim 3, wherein Z is -C(R)=N-O- or -O-N=C(R)- .

- Claim 61.     **(New)** The method of producing a composition of claim 3, wherein Z is  
CH(R)-NH-O-, -O-NH-CH(R)- .
- Claim 62.     **(New)** The composition of claim 3, wherein Z is  
-C(R)=N-Y-N=C(R)-, -N=C(R)-Y-C(R)=N-, -CH(R)-NH-Y-NH-CH(R)-  
or -NH-CH(R)-Y-CH(R)-NH-.
- Claim 63.     **(New)** The composition of claim 3, wherein Z is  
-CH=N-Y-N=CH- , -N=CH-Y-CH=N- , -CH<sub>2</sub>-N-Y-N-CH<sub>2</sub>- ,  
or -NH-CH<sub>2</sub>-Y-CH<sub>2</sub>-NH- .
- Claim 64.     **(New)** The composition of claim 3, wherein Z is  
-C(R)=N-O-Y-O-N=C(R)- , -O-N=C(R)-Y-C(R)=N-O-.
- Claim 65.     **(New)** The composition of claim 3, wherein Z is  
-CH(R)-NH-O-Y-O-NH-CH(R)- or  
-O-NH-CH(R)-Y-CH(R)-NH-O-.